



CEC Hearing on Strategic Transmission Planning Issues

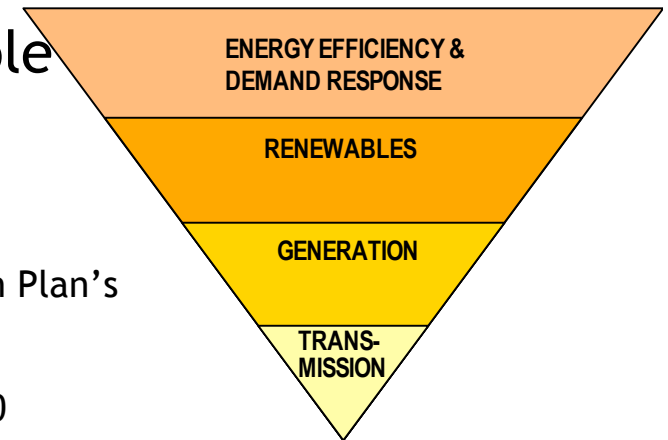
James Avery
Senior Vice President - Electric

July 28, 2005

Planning for Our Region's Energy Future



- Long Term Resource Plan depends on a balanced strategy to ensure a safe, reliable supply of energy. The plan relies on four strategic energy elements:



- Consistent with the CEC IEPR Process and the Energy Action Plan's Loading Order
- Continued emphasis on energy efficiency and conservation
- Increasing renewable energy supplies to 20 percent by 2010
- Building new generation resources in San Diego
- Adding new transmission

- D.04-12-048 states the following:

"We do not endorse or in any way approve the transmission projects proposed in the utilities' LTPP. Specifically with regard to SDG&E's request, we do acknowledge the lengthy process that is needed to plan, license and construct transmission, so we encourage SDG&E to continue its planning efforts and move forward with evaluating these transmission alternatives for meeting a local resource deficiency by 2010." (p. 96)

- Transmission is the next key piece

- Need to start the licensing process now

Summer 2005 - Resources

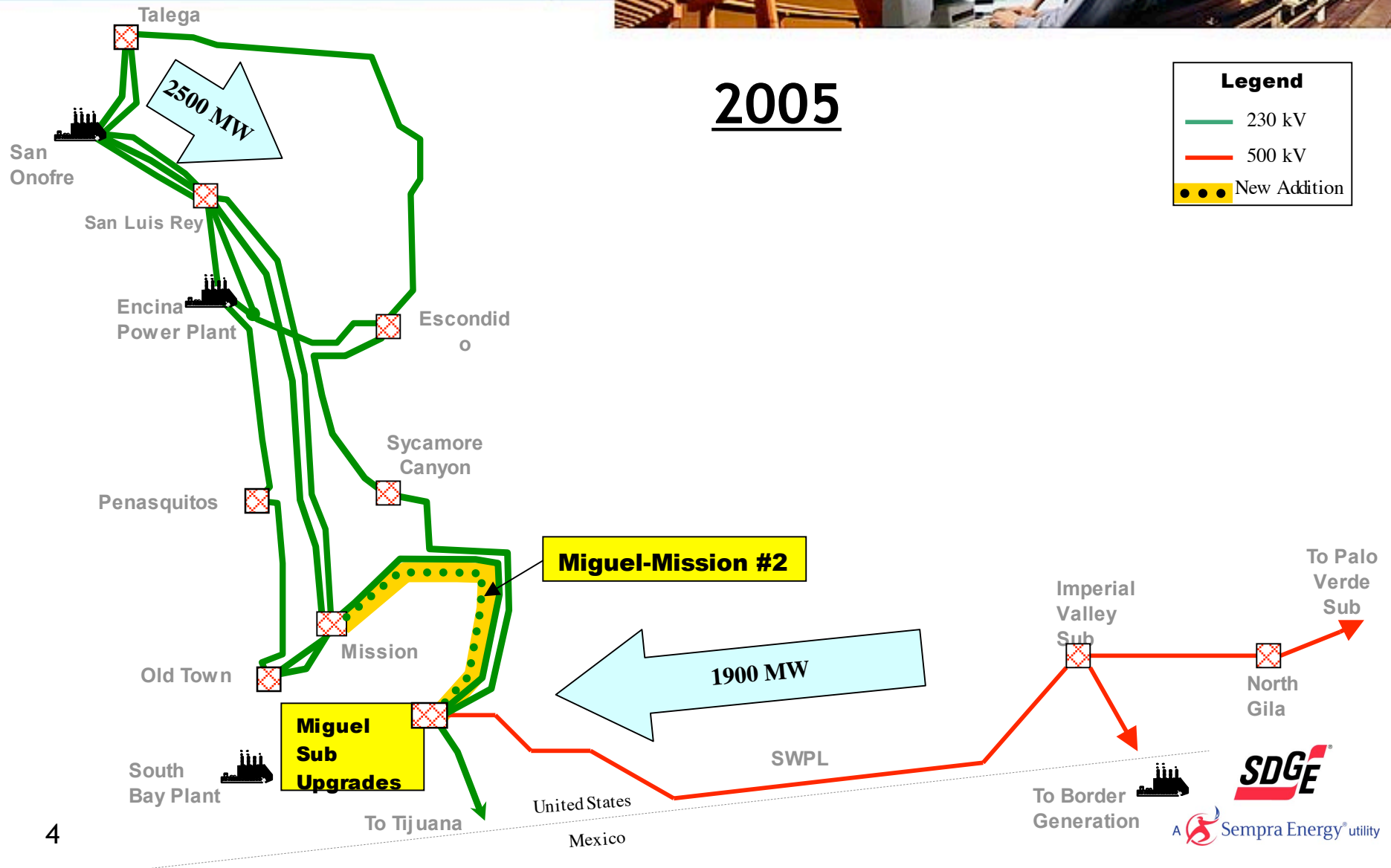


- **Demand Response Programs**
 - Day-Ahead: Up to 84 MW
 - Day-Of: Up to 82 MW
- **New Local Generation**
 - 46 MW - peaking capacity
- **Transmission Upgrades**
 - Miguel substation: October 2004
 - Mission-Miguel: New 230 kV line
 - Temporary operation June 6, 2005
 - Full operation on June 2006
 - Nine (9) additional projects completed that add to local reliability

Major Transmission Additions - 2005



2005



Future Outlook



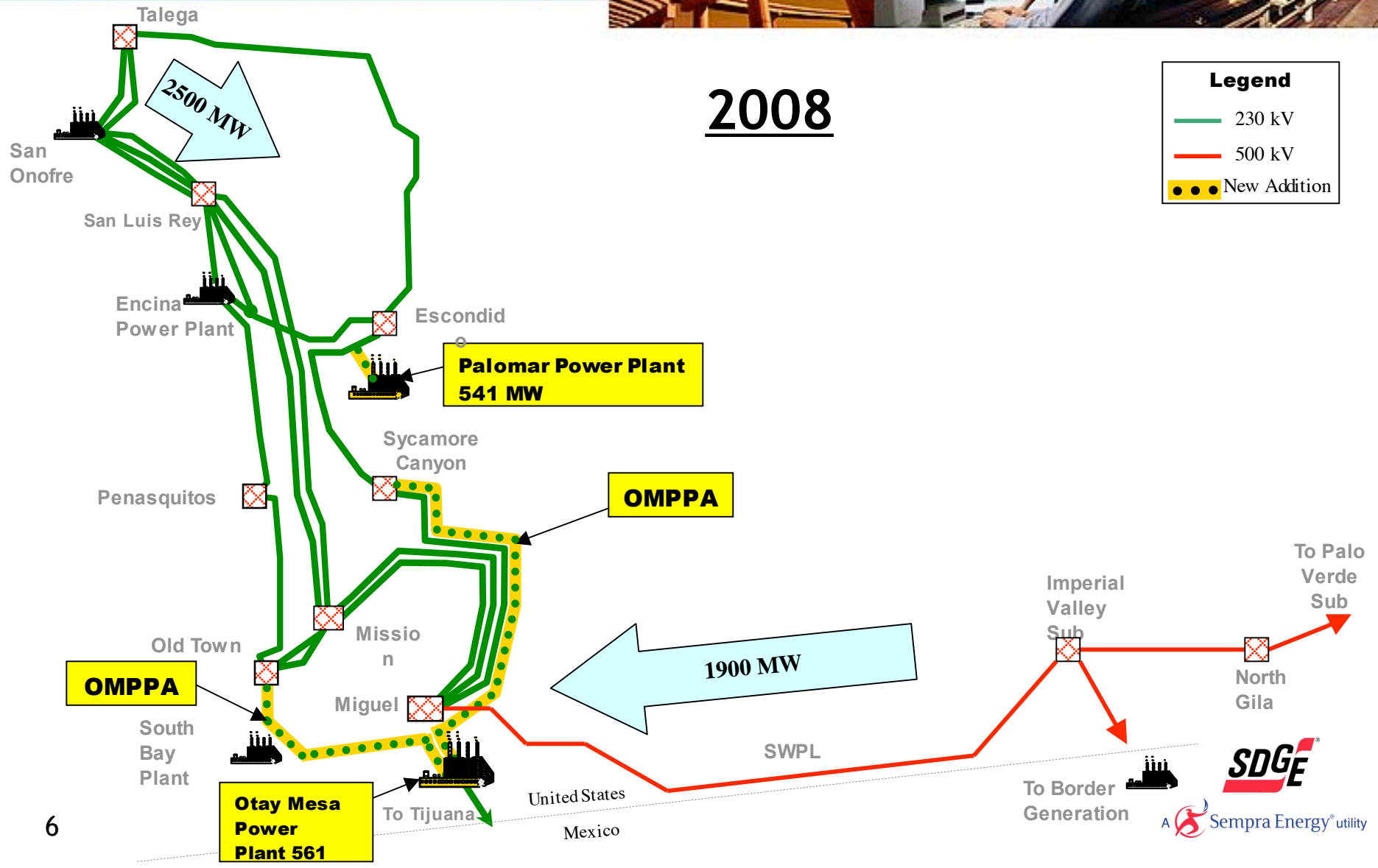
- **Demand-Side Management**
 - Energy Efficiency
 - Demand Response
- **Generation**
 - Palomar (541 MW)
 - Spring 2006
 - Otay Mesa (561 MW)
 - January 2008
- **Transmission**
 - Kumeyaay Wind Power (50 MW)
 - September 2005
 - New 500 kV Line
 - Summer 2010
 - Under study to determine preferred path
 - Access to new renewable resources



Major Transmission Additions - 2008



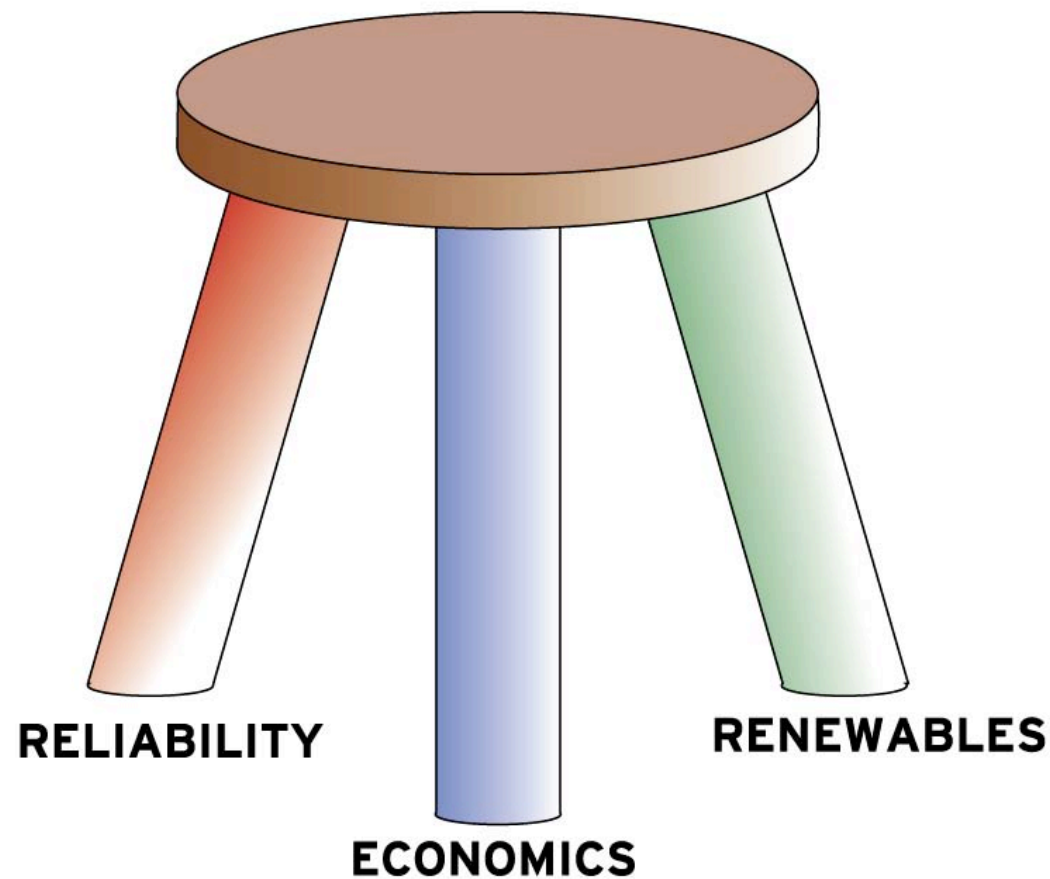
2008



500kV Transmission Project Update



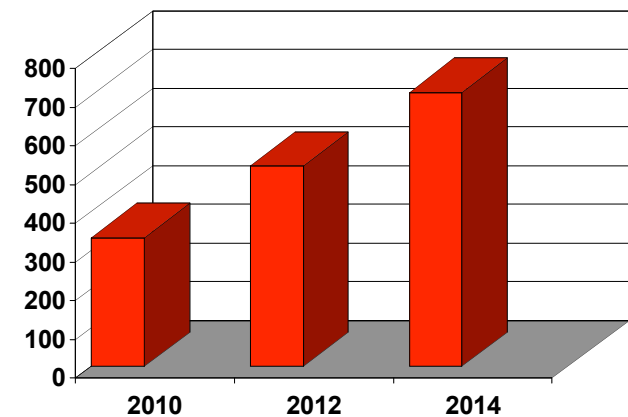
What Drives the Need for New Transmission



Reliability Need



- San Diego region is served by a single 500kV transmission line, which limits access to power sources.
- Existing 500kV transmission Line is congested and alone will **NOT** meet grid reliability needs for the region.
- Customers' demand for power and population growth require new transmission to meet reliability
- In order to meet future grid reliability in San Diego as early as 2010, a 333MW deficiency is projected
- Depending on load growth and generation retirements the need could be sooner
- Part of the overall Southwest Transmission Expansion Plan



Grid Reliability Shortfall
Beginning in 2010

When is the Project Needed?



Year	2008	2010	2012	2014
90/10 Load Forecast	4849	5038	5223	5413
Generation less G-1	2908	2205	2205	2205
Import Requirement	1941	2833	3018	3208
NSIL Import	2500	2500	2500	2500
Surplus/(Deficiency)	559	(333)	(518)	(708)

It is not a matter of “if” a new 500 kV transmission line is needed, it is a question of when.

Access to Renewables

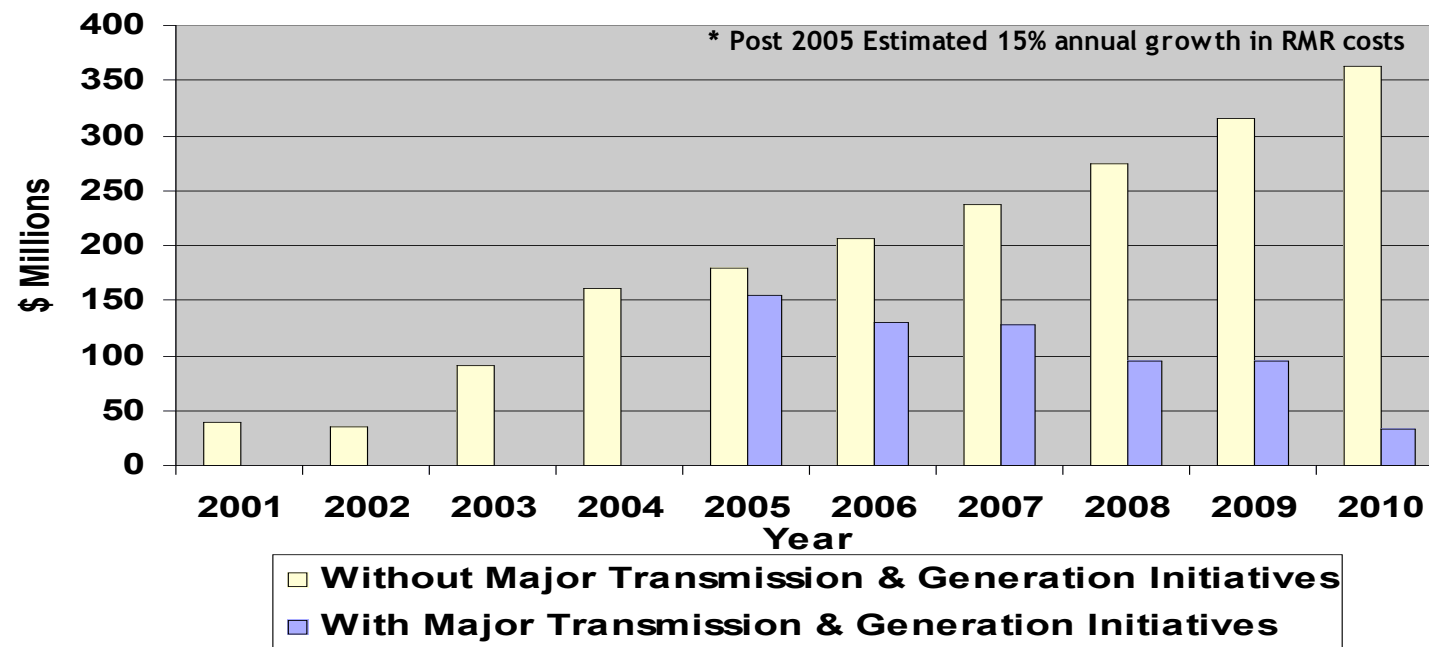


- To cost-effectively meet the 20 percent renewables goal by 2010, new transmission must be built
 - Must access renewables outside of San Diego in order to meet goal
- Approximately 600MW of wind potential in San Diego East County exists with inadequate transmission
- Approximately 2000 MW of potential Geothermal in Imperial Valley with inadequate transmission
- Substantial amount of solar potential in San Diego and Imperial Valley

Economics



- RMR and Congestion Costs



- Access to lower costs generation

Major Transmission Additions



2010

